

EPA's requests regarding Peabody Sampling Plan dated May 23, 2012

(based on discussion from May 31, 2012 internal meeting)

Sampling Summary & EPA requests: J. Pellegrini

Date: May 31, 2012

1. Effluent Sampling

Peabody proposed 5 effluent sample locations, one in each watershed, 2 in Busseron watershed.

Sampling frequency 2x/month for 4 months, (June, July, August, September ?), one under base flow conditions, one under precipitation conditions.

Total sampling events = 8

Used priority table suggested by EPA in selecting outfall locations.

*Note that sampling method is grab, and in stream (see page 4 of Appendix A)

Peabody's Proposed Parameters:

1. Metals: antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc
2. Acidity, alkalinity, chloride, hardness, pH, sulfate, total suspended solids (TSS) and TDS

EPA requested:

Sample frequency 2x/month per outfall.

Range of discharge types, dry weather, low flow & high flow/wet weather

Total sampling events: 20

1. Metals: mercury, iron, zinc, selenium, manganese, aluminum, cadmium, vanadium, and chromium.
2. pH, TDS and specific conductance
3. Cations: calcium, magnesium, sodium and potassium
4. Anions: chloride, sulfate, bicarbonate and phosphate

Missing parameters:

1. Metals: iron, manganese, aluminum, vanadium
2. Specific conductance
3. Cations: calcium, magnesium, sodium, and potassium
4. Anions: bicarbonate and phosphate

Effluent sampling: EPA Region 5 requests that:

1. All originally requested parameters for chemical testing of effluent be included for sampling and testing (see above listings).
2. All metal sampling and analysis, as stated in our March 22, 2012 Section 308 letter, "must include methods for both dissolved and total metals."
3. Also as stated in March 22, 2012 letter, "Selenium analysis must use low level methods such that quantification level is 1.0 ug/L or lower."
4. Effluent location selection of 03R be replaced by NPDES outfall #054

2. Ambient- Peabody refuses to conduct ambient sampling , see pages 9-10 on cover letter (see pages 4-7 of EPA's March 22, 2012 CWA 308 request for Ambient sampling)

*Note that effluent sampling method is instream, downstream of NPDES outfalls, the same method EPA requested for ambient sampling.

3. Whole Effluent Toxicity testing- Peabody refuses to conduct WET testing, see page 10 cover letter and Appendix C.
(see page 7 of EPA's March 22, 2012 CWA 308 request for WET testing/sampling)

4. Biological & Physical Habitat Sampling

Peabody Proposed Sampling:

Locations: 2 sample sites downstream of NPDES outfalls 03R and 062 (see attached Map 4E1).
NPDES 03R is in Busseron Creek watershed under SMCRA permit S-256
NPDES 062 is in Black Creek/ Spencer Creek watershed, under S-256-2

Sample frequency: One sample

Sample timing: to be sampled simultaneously with effluent sampling

Sample categories: Macroinvertebrate, Fish, and Physical Habitat

EPA requested:

Locations: Any areas not previously assessed and submitted in January 2012 Peabody response.
S-256-1 through S-256-4, downstream of NPDES outfall, but upstream from any tributaries.

Previously assessed areas biological & physical habitat assessment submitted by Peabody in January 2012, included S-256-4 and S-256-5.

Biological & Physical Habitat Sampling: EPA requests that:

1. Site selection of 03R, be replaced with downstream of NPDES outfall #054